

Work Order ID 139731

December 03, 2015 10:35:56 AM

139731Ship x1
Stock x1.

Page 1

Item ID: D206-558-041

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Single Mirror Installation

Start Date: 12/3/2015 Start Qty: 2.00

2

Cust Item ID:

Required Date: 12/3/2015 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals: Process Plan: SW Date: 20151203 Tooling: _____Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

IIN D206-558

D

100

Document Control

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Doc.Control -USB or Paperwork

Photocopy bluefile and type labels as per PPP D206-558-041 CHG009

SWB
12/12/13

110

Small Fab

0.00

110

Small Fab

Memo

0.02

Small Fab

Assemble as per Dwg D206-558
PAGE 10 IN BLUE FILEDAS
36
9-89

2

DEC 03 2015

120

QC5- Inspect part completeness to step on W/O

0.00

120

QC

Memo

0.00

Quality Control

SWB

2

DAS
38
9-89
DEC 03 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

Work Order ID 139731

139731

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December 03, 2015 10:35:56 AM

Item ID: D206-558-041 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Single Mirror Installation
 Start Date: 12/3/2015 Start Qty: 2.00 ***2*** Cust Item ID:
 Required Date: 12/3/2015 Req'd Qty: 2.00 ***2*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

125	Pick Kit	0.00							
125									
Packaging	Memo	0.00				2 DAS 8 9-89	DAS 28 9-89	DEC 03 2015	
Packaging									

130	QC4- 100% Inspect kits for completeness	0.00							
130									
QC	Memo	0.00							
Quality Control									

2x SmB
15/12/13

140	Packaging	0.00							
140									
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D206-558-041 LOCATION: FG011								

X2 SmB
15/12/13

for X)
 RPS X sold

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____							
Misidentified	☐	Past Due	☐								

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Page 3

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Stop ***NS2***

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Cust Item ID:

Required Date: 12/3/2015 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start ***NR1***

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

150

QC21- Final Inspection - Work Order Release

0.00

150

QC

Memo

0.00

Quality Control

DEC 03 2015

MCS

20151203

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
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		OTHER : ☐							

Picklist Print

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Page 1

Work Order ID: 139731

139731

Parent Item: D206-558-041

D206-558-041

Parent Item Name: Single Mirror Installation

Start Date: 12/3/2015

Required Date: 12/3/2015

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP F02.09.19Re-format; Incorporated D2065KJ
 IPP Rev:G 08-05-14 now @ chg006/ add D3778-1 per ECN1171 DD
 verified:ec
 IPP Rev:H 08-08-19 now @ chg 007 DD verified by:ec IPP Rev:I
 10.03.17 add pick kit DD verified by:JLM IPP REV:J 11.01.19 AS
 PER CHG009 DD VERF:EC IPP REV:K 14.09.09 AS PER IIN
 REV.D DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2011-101 *D2011-101* Mirror 6"		Manufactured	No			110	Each	12.0000	1	2		DAS 8 9-89	
Location Loc Qty Loc Code													
				FG				2					
				106348				2					
				ST384				10					
				122000				4		2			
				135152				6					
D2052 *D2052* Bracket		Manufactured	No			110	Each	21.0000	2	4		DAS 30 9-89	
Location Loc Qty Loc Code													
				GA				21					
				108808				21		4			
D2053 *D2053* Bracket		Manufactured	No			110	Each	26.0000	1	2		DAS 28 9-89	
Location Loc Qty Loc Code													
				ST002				10					
				101704				10		2			
				ST012a				16					
				108842				16					

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Work Order ID: 139731

139731

Parent Item: D206-558-041

D206-558-041

Parent Item Name: Single Mirror Installation

Start Date: 12/3/2015

Required Date: 12/3/2015

Start Qty: 2.00

Required Qty: 2.00

D2054	Manufactured	No	110	Each	35.0000	2	4	DAS 30 9-89	DEC 03 2015
-------	--------------	----	-----	------	---------	---	---	-------------------	-------------

D2054

Bushing - Delrin

**

Location

Loc Qty

Loc Code

GA

35

109091

35

4

D2055	Manufactured	No	110	Each	27.0000	1	2	DAS 30 9-89	DEC 03 2015
-------	--------------	----	-----	------	---------	---	---	-------------------	-------------

D2055

Clamp

**

Location

Loc Qty

Loc Code

GA

27

105730

20

95397

7

2

D2056	Manufactured	No	110	Each	11.0000	1	2	DAS 30 9-89	DEC 03 2015
-------	--------------	----	-----	------	---------	---	---	-------------------	-------------

D2056

Bell Crank Assembly

**

Location

Loc Qty

Loc Code

GA

11

109921

11

2

D2057	Manufactured	No	110	Each	17.0000	1	2	DAS 30 9-89	DEC 03 2015
-------	--------------	----	-----	------	---------	---	---	-------------------	-------------

D2057

Plug

**

Location

Loc Qty

Loc Code

GA

17

112928

17

2

Picklist Print

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Work Order ID: 139731

Parent Item: D206-558-041

Parent Item Name: Single Mirror Installation

139731

D206-558-041

Start Date: 12/3/2015

Required Date: 12/3/2015

Start Qty: 2.00

Required Qty: 2.00

D2065

Manufactured

No

110

Each

4.0000

1

2

D2065

Mirror Arm

**

DAS
8
9-89

Location

Loc Qty

Loc Code

ST360

4

132648

4

MS21042L3

Purchased

No

110

Each

0.0000

2

4

MS21042L3

Nut

**

2

M/133498 (42)

DAS
8
9-89

MS27039-1-18

Purchased

No

110

Each

1,856.000

2

4

DAS
30
9-89

MS27039-1-18

Screw

**

Location

Loc Qty

Loc Code

cck007a

1373

124326

1373

GA

266

123522

66

124326

200

ST284

217

124326

217

NAS1149D0363J

Purchased

No

110

Each

448.0000

4

8

DAS
30
9-89

NAS1149D0363J

Washer

**

DEC 03 2015

Location

Loc Qty

Loc Code

GA

141

m130799

141

ST263

307

m133709

307

8

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139731

D206-558-041

Required Date: 12/3/2015

Required Qty: 2.00

8

$$\begin{array}{r} 142 \\ 6 \\ \hline 289 \end{array}$$

**DAS
28
9-89**

Loc Code

8

D-43
 6
 9-89

DAS
28
9-89

Loc Code

2

D48

DAS
28
9-89

Loc Code

2

D.

DAS
28
9-89

Loc Code

DEC 03 2015

Picklist Print

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Work Order ID: 139731

139731

Parent Item: D206-558-041

D206-558-041

Parent Item Name: Single Mirror Installation

Start Date: 12/3/2015

Required Date: 12/3/2015

Start Qty: 2.00

Required Qty: 2.00

D3778-1 Manufactured No

125 Each

6.0000

1 2

D3778-1

Bracket

**

DAS
6
28
9-89

Location

Loc Qty

Loc Code

ST513

6

131854

6

MS21042L3

Purchased No

Each

0.0000

1 2

MS21042L3

Nut

MS21919-DG5

Purchased No

125 Each

22.0000

2 4

MS21919-DG5

Clamp

**

16984

DAS
6
28
9-89

Location

Loc Qty

Loc Code

ST293

2

m128813

2

ST297

20

m129499

20

MS35489-67

Purchased No

125 Each

58.0000

1 2

MS35489-67

GROMMET

**

DAS
6
28
9-89

Location

Loc Qty

Loc Code

ST274

58

121600

58

MS35489-9

Purchased No

125 Each

14.0000

1 2

MS35489-9

Grommet

**

DAS
6
28
9-89

Location

Loc Qty

Loc Code

ST275

14

m132262

14

DEC 03 2015

Picklist Print

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Work Order ID: 139731

139731

Parent Item: D206-558-041

D206-558-041

Parent Item Name: Single Mirror Installation

Start Date: 12/3/2015

Required Date: 12/3/2015

Start Qty: 2.00

Required Qty: 2.00

NAS1149D0332J

Purchased

No

125

Each

1,877.000

6

12

NAS1149D0332.J

Washer

~~DAS~~

6

~~9-89~~

DEC 03 2015

DAS

28

9-89

Sms 27

Location

Loc Qty

Loc Code

CA

14

m129682

14

FP001

72

m129682

72

GA

357

m132677

357

ST264

1434

m133498

1434

12

REFERENCE ONLY

DART AEROSPACE LTD.

D206-558
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4.0 WEIGHT AND BALANCE

Installation	Weight	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D206-558-041	2.4 lb	+5.0 in	+12.0 in-lb	+14.8 in	+35.5 in-lb
Bell 206A/B/L/L1/L3/L4	1.09 Kg	+0.13 m	+0.14 m-Kg	+0.38 m	+0.41 m-Kg
D206-558-043	3.0 lb	0.0 in	0.0 in-lb	+14.8 in	+44.4 in-lb
Bell 206A/B/L/L1/L3/L4	1.36 Kg	0.0 m	0.0 m-Kg	+0.38 m	+0.52 m-Kg
D407-558-045	2.4 lb	+5.0 in	+12.0 in-lb	+14.8 in	+35.5 in-lb
Bell 407	1.09 Kg	+0.13 m	+0.14 m-Kg	+0.38 m	+0.41 m-Kg
D407-558-047	3.0 lb	0.0 in	0.0 in-lb	+14.8 in	+44.4 in-lb
Bell 407	1.36 Kg	0.0 m	0.0 m-Kg	+0.38 m	+0.52 m-Kg

5.0 PARTS LIST

Qty -041	Qty -043	Qty -045	Qty -047	Part Number	Description
X				D206-558-041	SINGLE CARGO MIRROR ASSEMBLY
	X			D206-558-043	DUAL CARGO MIRROR ASSEMBLY
		X		D407-558-045	SINGLE CARGO MIRROR ASSEMBLY
			X	D407-558-047	DUAL CARGO MIRROR ASSEMBLY
1	2	1	2	D2011-101	MIRROR ASSEMBLY
2	2	2	2	D2052**	BRACKET
1	1	1	1	D2053	BRACKET
2	2	2	2	D2054**	BUSHING
1	1	1	1	D2055**	CLAMP
1	1	1	1	D2056**	BELLCRANK ASSEMBLY
1		1		D2057	PLUG
1		1		D2065	ARM
	1		1	D2066	ARM
1	1	1	1	D2067	CONNECTOR
1	1			D2071	CABLE ASSEMBLY
		1	1	D2071-5	CABLE ASSEMBLY
1	2	1	2	D3014-1*	LOCKNUT
1	1			D3778-1	BRACKET
		1	1	D3778-3	BRACKET
4	4	4	4	AN3-4A	BOLT
4	4	4	4	AN526-1032R9	SCREW
1	2	1	2	NAS1149D0416P*	WASHER (AN960JD416L)
4	4	4	4	NAS1149D0363P**	WASHER (AN960JD10)
6	6	6	6	NAS1149D0332P	WASHER (AN960JD10L)
3	1	3	1	MS21042-3	NUT (or MS21042L3)
	2		2	MS21042-3**	NUT (or MS21042L3)
2	2	2	2	MS21919DG5	CLAMP
2	2	2	2	MS27039-1-18**	SCREW
1	1	1	1	MS35489-9	GROMMET
1	1	1	1	MS35489-67	GROMMET

* INCLUDED AS PART OF D2011-101 MIRROR ASSEMBLY

** INCLUDED AS PART OF D2066 ARM (REF. -043/-047 ONLY)

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Revision: D
Date: 14.08.08